

This question paper contains 3 printed pages]

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S. No. of Question Paper : 2936

Unique Paper Code : 2232581201

Name of the Paper : DSC Entomology

Name of the Course : B.Sc. (P) Applied Life Sciences with
Agro Chemicals and Pest Management

Semester : II, (NEP-UGCF)

Duration : 2 Hours

Maximum Marks : 60

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt 4 questions in all.

Question No. 1 is compulsory.

Draw well labelled diagram wherever possible.

1. (a) Define the following :

4

(i) Mosaic vision

(ii) Pteralia

(iii) Raptorial leg

(iv) Air sacs

P.T.O.

- (b) Differentiate between the following (any *two*) : 4
- (i) Trichoid and Campaniform sensilla
 - (ii) Suture and Sulcus
 - (iii) Instar and Stadium
 - (iv) Chitinous wing and Membranous wing
- (c) Give the location and function of the following : 4
- (i) Halteres
 - (ii) Retinula
 - (iii) Johnston's organ
 - (iv) Malpighian tubules
- (d) Classify the following upto the order : 3
- (i) Cockroach
 - (ii) Butterfly
 - (iii) Silver fish
2. (a) Name the different organs/structures involved in the excretion in insects. Explain the physiology of excretion in the primary organs in detail with the help of suitable diagram. 8
- (b) Give an account on functional morphology of mouth parts found in the house fly and honey bee. 7

3. (a) Describe morphology of a leg in typical insect and its modifications. 8
(b) What is metamorphosis ? Give an account on the types of metamorphosis with examples. 7
4. (a) Give an account on respiration in terrestrial insects with diagram. 8
(b) Write characteristics of class Insecta with suitable examples. 7
5. (a) Describe in detail the structure and physiology of the three main regions of the insect alimentary canal in insects. 8
(b) Describe the morphology of thorax in a typical winged insect. 7
6. Write short notes on any *three* of the following : 5×3=15
- (i) Types of legs
 - (ii) Chemoreceptors
 - (iii) Ommatidium
 - (iv) Parthenogenesis
 - (v) Hemolymph

